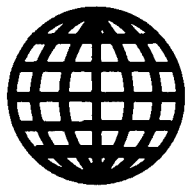


JPRS-ULS-92-018
23 JUNE 1992



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Science & Technology

***Central Eurasia:
Life Sciences***

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Science & Technology

Central Eurasia: Life Sciences

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UK, Swiss Supply Essential Drugs to Moscow

924A1252A Moscow IZVESTIYA in Russian
30 May 92 Morning Edition p 6

[Report by Andrey Krivopalov, IZVESTIYA: "After the SOS From Ostankino: How the London-Moscow Rescue Bridge Came About"]

[Text] A small cargo, only 15-20 kilograms, is to be sent by Aeroflot from the British capital. Without exaggeration, it is priceless; the sender is the Russian Embassy, and the destination is the oblast Scientific-Research Clinical Center in Moscow.

First, a little less than a month ago, there was a television report prepared by one of the Ostankino production teams. Its topic was the desperate situation in this center; specifically, in the chronic hemodialysis and kidney transplant department.

"In the past the Ministry of Health Care was buying this medication—it was very expensive, by the way, 100 pound sterling per 30 ampoules—for hard currency," D. Bondar, a member of the Russian Embassy in London, told us. "The oblast center department, which performs kidney transplants at a very high professional level, received its share. Now the supply is exhausted. The cyclosporin is needed by the patients both while they are in the clinic and for one year after the operation. At the same time, we were told that purchases have been interrupted by the lack of hard currency in the treasury."

So the issue truly is one of life and death. A similar situation exists in sister medical institutions—the Transplant Institute of Russia and the oblast center for kidney transplants in St. Petersburg. They also have stopped doing kidney transplant operations.

"I hear that there are still some quantities of this medication in Vilnius and Yerevan, which also used to receive it under the old centralized procedures of distribution of pharmaceuticals," he continued. "It is close to its expiration date. From what we hear, they do not do that many operations of this kind there. Considering that the ties between the medical centers have been disrupted, it appears that it is not easy to get the medication from one center to another; the SOS that went out over the Moscow airwaves also reached the Russian Embassy in London. The initiative came from Ambassador B. D. Pankin.

"I will add this from myself. The Embassy of Russia has established a direct link with the Sandoz company; they promised to send a second shipment next week, this time directly from Basel. It is several times larger than the one being sent from London. The calculation here is as follows: Fifteen to 20 kilograms of the medication means 15-20 lives saved. The Moscow oblast center is willing to share the medications it receives with St. Petersburg and the Moscow Transplant Institute.

"It is time to say where the money to pay for the medication is coming from. The bulk of it—60,000

pounds—is money bequeathed to the embassy for humanitarian purposes by a certain Englishman. (His name is known, but he wished to remain an anonymous benefactor, and the wish of the deceased is to be honored.) Another 8,000 pounds were still in the account—they had been contributed earlier for the same purpose by our people assigned to London."

Research Facility Linked to Aral Illnesses

92WN0557A Tashkent MOLODEZH UZBEKISTANA
in Russian 16 May 92 p 5

[Article by Urinbay Yesirkepov, physician, chairman of the Muynak branch of the Union for Protection of the Aral and Amu Darya: "There Is an Island of Revival in the Aral...: Who Is Declassifying the Secrets"]

[Text] MOSKOVSKIYE NOVOSTI is not inclined to publish reprints, but it changed its principle this time. It reprinted from the American weekly U.S. NEWS AND WORLD REPORT an article devoted to the catastrophic ecological situation on the territory of the former Soviet Union. The article created a sensation throughout the world. It contains some lines about the Aral area:

"Because of the tapping of water for irrigation from the rivers that feed the Aral Sea, it is drying up and evaporating. This has disturbed the precipitation regime, and the average air temperature has increased by three degrees. So much salt and dust enters the atmosphere that the level of the solid particle content has increased by more than five percent."

Alas, this is not the only problem of the Aral area.

For a long time Muynak residents have travelled to the Vozrozhdeniye and Lazarev Islands during July and August to catch delicate fish—chemaya, for which there was a great demand. Large carp, immense sheat fish, and sturgeon were also in abundance here.

Fishing has been prohibited in the water area of Vozrozhdeniye Island since 1950. They started doing research here. What kind? One could only guess about this, and it is still not completely clear. But in the waters around Lazarev Island they were catching fewer and fewer chemaya each year. The last trip there was in 1963, and the fishermen returned almost empty-handed: The fish had disappeared.

Before the Aral grew shallow some cargo intended for Vozrozhdeniye Island was being transported by civilian ships, but when they approached the island the crew was put in jail and placed under a military guard. What kind of transportation are the researchers using, now that the sea has disappeared? Is it air or land transportation, and is it through Ustyurt? Is this cargo dangerous for my children, relatives, and compatriots?

During the seventies the fishermen began to observe strange phenomena in the behavior of the fish in the Aral

Sea and animals on Ustyurt. Half-dead fish were washed ashore. An especially large number of sturgeon died.

Dead saigas have been found more and more frequently on Ustyurt. The fishermen tell us about "drunk" saigas staggering down to the Lake Sudochye from the direction of the plateau. They were caught by hand and the meat was used for food and taken home. In the middle of the eighties a mass dying out of saigas was observed.

During these same years on Ustyurt at night people were always seeing an orange-reddish illumination at a low altitude from the direction of the village of Uch-say. Was this not what got the saigas drunk? There is no answer.

Do these and a multitude of other facts not show that the activity of the military on Vozrozhdeniye Island and the Ustyurt plateau not only caused economic damage but also threaten everything living?

Every 128th resident of Muynak is a cancer patient. This is an official statistic. In 1988 the average age of people registered with the Uch-say village soviet who died was 26.5 years. Can it really be considered a natural death at that age? Almost all adults here died of cancer of the digestive organs.

And here are some quite "fresh" data. Of the 736 children born in the Muynak maternity hospital in 1991 only 14 had normal births. Every 43rd child was deformed and every 12th was born with a medium or severe degree of asphyxia, and they were actually ill children.

Does a certain amount of "credit" for all this not go to the "researchers" working on Ustyurt, for our territory borders on it? There is no answer.

Now they are trying to prove to us the advantages of building a facility for decontaminating pesticides here. This must not be allowed! In their news interviews the military specialists promise to earn hard currency for us by using our land to decontaminate toxins from other regions of the CIS. But with money you can buy medicine but not health. The population of our republic is living in an ecological disaster zone to begin with.

As a physician, as a deputy of the rayon soviet, and as a person living in this very zone, I say that it is time to consider the problem of the allotment of funds by former republics of the Union for studying the population of Karakalpakstan, especially the northern regions, at the cytogenetic level. I think it is immoral to turn our backs on people who have been placed at the brink of death without even explaining to them the causes of their premature deaths.

Ufa Water Supply Said Contaminated With Phenol, Dioxin

PM2005092792 Moscow Teleradiokompaniya Ostankino Television First Program Network in Russian 1400 GMT 13 May 92

[From the "Novosti" newscast; Video report by M. Gafurov and F. Valeyev, identified by caption, from Ufa]

[Text] [Gafurov over video of stagnant water cluttered with debris] Ufa's water supply has been contaminated! This warning was first heard in spring two years ago. At that time, as a result of a leak of toxic phenol waste from the "Khimprom" Association into Ufa's southern water intake, more than 600,000 Ufa residents were suddenly and for a long time deprived of drinking water.

However, it appears that there are worse things than phenol. Ufa residents may, for decades, have been drinking water contaminated by dioxin. You may ask: What sort of a substance is this? To put it simply, chemists have explained to me that this poison is considerably more toxic than potassium cyanide.

[M.G. Saforov, chairman of the All-Russian Nature Conservation Society's Bashkir Republic Council Presidium, over video of the southern water intake facility, identified by caption later] The dioxin content at the southern water intake facility is not just catastrophic. It has passed that point. It is 172 million times above U.S. limits. Yet Ufa residents are using this water. [Video shows dirty stagnant water cluttered with debris, industrial plant, railroad tanker cars, water intake facility, and interview.]

Sorbents Added to Food Products for Elimination of Radionuclides

927C0411A Kiev *RABOCHAYA GAZETA* in Russian
22 Apr 92 p 4

[Article by Aleksandr Oleynik: "Macaroni To Strike Radionuclides"]

[Text] Colored macaroni was shipped to the commercial network of regions of Chernigov that were affected by the Chernobyl accident. As shown by studies carried out by Odessa scientists, an extract of pressed skins of red grape varieties is an excellent sorbent, which eliminates radionuclides from the body. Addition of a small amount of this extract to macaroni renders this food genuinely therapeutic. And it has no effect on the flavor and caloric value of macaroni.

"The only problem," stated the deputy director of a macaroni factory, Tamara Sokolovskaya to Aleksandr Oleynik, UKRINFORM correspondent, "is to overcome the psychological resistance of consumers. After all, everyone is used to white and yellow pasta products, rather than dark red. We are relying on the help of merchants, as well as the explanation provided on the package. The volume of future production depends on how well the first 17 tons of this macaroni will sell. As for the protective agents, the people of Odessa promise a virtually unlimited supply.

Pressed grape skins are not the only natural protective agents. Extracts of cherries, black currants and blackberries have similar action. And the spectrum of their application is rather broad. The sorbents can be added to confectionery products, juices, water and even dairy products. The Odessa specialists have already begun to work on setting up production of the above at enterprises of the Chernigov Oblast Association for the Production of Foodstuffs.

Reasons for Medical Worker Strikes Detailed

927C0411B Sankt Peterburg *SANKT PETERBURGSKIYE VEDOMOSTI*
in Russian 28 Feb 92 p 2

[Interview by Z. Fedorova: "Why Are Medical Personnel on Strike?"]

[Text] "Dear Comrades! Lately we often see on television some people in white coats who are either warning of an impending strike, or already on strike. What is going on? After all, if medical workers are on strike it means that people needing medical attention could die without it. Who in power has allowed things to go this far? Do deputies of the city council know about all this? Can we sleep in peace?"

[Signed]: Ye. Sukharevskaya, M. Pustovalova, N. Ignatyeva and S. Maksakova, veterans of war and labor.

The editorial board asked that of A. N. Musakov, deputy to the city council, and deputy chairman of the permanent deputy commission for health care. This is what he told our correspondent, Z. Fedorova:

[Musakov] I fully understand the concern of elderly citizens and believe that when people from systems of the public's life-support systems have begun to strike it means that there is trouble at home. In the past something like this happened in the first post-revolution years; some medical workers also demanded that their wages be raised. At that time, at the suggestion of the government, a decision was made to meet all of their demands, since it realized that these specialists determine whether or not people will be in good health and alive.

[Fedorova] What about the present—everybody including the deputies fails to understand this?

[Musakov] I think that it is first of all the executive branch of medical that underestimates the role of the life-support system, i.e., management of the municipal council committee for health care, the performance of which, incidentally, our commission has just analyzed.

[Fedorova] What prompted the need for such analysis?

[Musakov] Numerous complaints to the city council from both health care workers in the city and patients. In particular, as we know a difficult situation developed in the emergency service: The number of vehicles was reduced, there was no transportation to respond to calls, whereas there were no spare parts to repair existing vehicles.

After the deputies made a thorough study, they found that all of the blame can be placed on the performance of management of the ambulance association (OSAT) and its chief, Sidorov, who sold a considerable portion of the vehicle fleet and spare parts for more than a million rubles in recent years. The emergency service workers themselves informed the committee for health care about this, and the KRU [control and inspection administration] committee provided the information. But the committee chairman, M. I. Balyasov, did not react to these signals in any way until criminal proceedings were instituted against Sidorov. The plunderer was relieved of his duties, but also only after the letter of OSAT workers to A. A. Sobchak and personal intervention of the mayor. It appeared that the committee was not interested in putting things in order in such an important city service.

In conclusion about the conversation about the emergency service, let me say that a considerable part of the demands of its employees has been met, and the Council adopted a decision to raise wages, organize nutrition, and provide warm clothing. But tension was not removed because questions of the fleet of vehicles, garages, and spare parts have still not been resolved. In this respect, the commission of deputies is not making an adequate effort.

This is only one of the explosive situations generated by the health care committee. There have been others. For example, the medical workers at Nevskaya Gate remember well the conflict in the 18th maternity home where there was the threat of a strike. There too, the committee was unable to comprehend in time why management proposed to shut down this facility for major repairs (after having been in operation for only six years) and disband all the employees.

Of course, a striking emergency service is a serious threat to the city. But it is as great a tragedy to have inoperative operating rooms and, at the same time, enormous lines of patients requiring surgical intervention. Yet, this is expressly the situation that developed at higher educational and clinical medical institutions. In the later there is a shortage of instruments and equipment, as well as low wages, and enormous number of departures of qualified personnel. Could it be that this worried the management of the health care committee? Not at all. Our commission, to insure the committee, is presently preparing a document concerning a raise for employees of clinical institutions to be financed by the city budget.

The commission of deputies was interested in the entire spectrum of activities of the committee and its chairman, M. I. Balyasov, and it became convinced that the complaints addressed to the city council are valid.

We also encountered legal ignorance on the part of the committee administration in the course of our analysis. It is the cause of many inadequate decisions. And, lastly, we just received the conclusion of the chief controller-auditor of the Ministry of Finance for our city about the results of an inspection of financial activities. It states this: "An increase in illegal and wasteful expenditures was found in the committee's health care institutions, which totaled 1,635,000 rubles."

Problems of switching to insured medicine could and must be solved faster and more effectively by the committee. After all, there is a decision of the Supreme Soviet of Russia about the transition to mandatory

medical insurance as early as January 1993. One must prepare very seriously for this.

Much could be done by Balyasov and his colleagues, if they were capable of so doing. The commission's conclusion is that the performance of the committee chairman is deemed unsatisfactory, and a recommendation was approved to be submitted to the mayor's office about replacing management. Would you believe that by no means did we take this action to spite A. A. Sobchak. I would say that therein the deputy commission itself recognizes its culpability, since the chairman of the committee was appointed by a session with our approval.

[Fedorova] How did the mayor and the municipal council react to this recommendation?

[Musakov] That is the prerogative of the municipal council. But I think that we have a common interest in solving this problem.

[Fedorova] Thus, the "diagnosis" has been made. How do you view realistic future steps to stabilize the situation in medical institutions of our city?

[Musakov] I shall not dwell on this in detail, a few days ago your newspaper wrote about the transition to a market economy in the area of medical services, and this should finally solve the most acute problems of our really tormented medicine. This matter is new to all of us and, hopefully, promising, but at the same time it requires quite a bit of energy and cleverness from health care management on all levels. After all, in the time remaining before the new year we are all expected to retain operational management of medical institutions, on the one hand, and implement the transition to a new form of rendering medical care, on the other. This should be the goal of all medical workers.

If we are able to implement the transition to new forms of medical care, there will no longer be any need for strikes. And, I am firmly convinced, people will be able to sleep well.

Russian-American Cooperation Produces Medicines Conforming to World Standards

927C0401A Moscow ROSSIYSKAYA GAZETA in Russian 8 May 92 p 5

[Article by V. Sluzhakov: "Akrikhin' Starts Up and Will Not Lose." First paragraph is ROSSIYSKAYA GAZETA introduction in boldface.]

[Text] For the first time the Soviet medical industry is manufacturing preparations that fully meet world guidelines and standards, with the help of American pharmacists.

Near Moscow, in Kupavna, a building has been opened at the Akrikhin chemical-pharmaceutical plant for the production of the highly effective preparation capoten. Capoten is used in the treatment of hypertension and cardiac failure. The approximate cost is about 40 rubles per packet. Production capacity will make it possible to not only fully supply the needs of Russia, but also to export the preparation for hard currency. Such proposals have already been made by a number of countries of the CIS.

There is also another side to the matter. Due to our poverty this year, we have virtually refrained from the purchase of similar preparations: They are not on the list of those that are considered vital. Therefore, the advent of capoten on our market is no small affair. Aleksandr Apazor, general director of Farmimpeks, predicts that it will be a great success. Incidentally, Akrikhin and the U.S. company Bristol Meyers Squibb will share it equally. Finally we have an instance where the western partner acts in spite of the complex guidelines. For example, a world-famous company spends a great deal of money on its advertising and sponsors programs shown on television on Sunday afternoons. Another world-famous company, an undoubted leader in American business, is decorating its office in Moscow and conducting careful negotiations.

But neither of them will dare begin actual business yet, as long as they feel that the market here is dangerous for them. Otherwise they would not hesitate, and in addition the inconvertibility of the ruble and the impossibility of buying land to build a plant restrain western partners.

Incidentally, the recent admittance of Russia to the MVF [as published] should give them and the Soviet officials the resolution. The government is already planning to make the ruble convertible by summer and thus solve one of the many problems facing western investors.

Traditionally we have bought and continue to buy prepared pharmaceuticals— for a great deal of money. In the opinion of Ivan Tyulyayev, director of the Akrikhin plant, the difference between the final form and the semi-finished product in the western market is 500 to 800 percent; if the workshop was obtained from the Americans for five million dollars, and we had to pay Bristol Meyers Squibb for it, even in that case it would pay for itself within a year with the manufacture of semi-finished products. Similar technology with the use

of western substances is extremely enticing and effective, since with some forms of drugs it is possible to save almost two times the hard currency. However, for this it is necessary that the American experience at Akrikhin does not remain a precedent but becomes ongoing.

It has not been ruled out that it will really happen. For one of the leading companies in world pharmaceuticals, the annual volume of sales without Russia was 11 billion dollars last year. The construction of a new plant in Russia will not have a significant effect. Nevertheless, the possibility of becoming established in a new market may force the company to take this step. Judging by everything, the Americans' style of work is also very attractive to Soviet pharmacists.

Of course, it is not all that simple. The new project is estimated to cost at least 80 million dollars. The company is ready today to invest its 40 million. Tyulyayev has to decide where to get the rest. It has not been ruled out that he may use South Korean credit, since it is supposedly the decision of the government on this account. For major South Korean companies the perspective is rather enticing: They will deliver approximately 40 percent of the equipment to the account of a contract. The administration of Noginskiy Rayon near Moscow in turn will also do everything possible for the construction of the plant.

Thus it is quite likely that in the foreseeable future a new Russian-American joint venture will begin manufacturing cardiovascular and oncologic preparations, liniments, and injections that fully meet world standards. The Soviet counterparts will receive pharmaceuticals, and it is possible that our pharmaceuticals will be an example of how to remedy the problem of being inadequate.

Lack of Financing, Equipment Hobbles Clinic for Children of Aral, Semipalatinsk Regions

927C0401B Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 31 Mar 92 p 3

[Article by A. Mashkeyev, director of the Kazakhstan Scientific Research Institute of Pediatrics, doctor of medical sciences: "Just Imagine: Children in Trouble, and Few Are Helping". First paragraph is KAZAKHSTANSKAYA PRAVDA introduction in boldface.]

[Text] Due to the economic difficulties the republic is facing, the Kazakhstan Scientific Research Institute of Pediatrics is experiencing great difficulties in the further development of research and in rendering skilled medical care to children under conditions of the ever-growing need for it.

Up to 3,000 children with serious diseases of the blood and nervous system and cardiovascular pathology from

all the oblasts of Kazakhstan receive specialized treatment at its clinic annually. Children from the Semipalatinsk and Aral regions are given priority with respect to hospitalization.

However, due to a deficit in budget financing and material resources, the institute clinic does not have the necessary modern therapeutic and diagnostic equipment, which creates situations that cannot be explained to parents and are tragic for the seriously ill children. The problem of treating hematologic patients is especially acute.

According to the information we have available, almost 150 children become ill for the first time with acute leukemia each year in Kazakhstan. This means that all of them will be doomed in coming years if not provided complete treatment at a modern level.

The Care-Germany Society sent a letter inviting two specialists for an internship in Germany. The social movement "Physicians for a Nuclear-Free World" also offered aid to two of our pediatric hematologists for internship in Germany.

In all these instances the Germans are financing the stay of the physicians and the sick children and their parents in Germany.

In addition, 18 sick children were invited by the Cuban government for treatment and recovery at the Jose Marti Sanatorium near Havana. Cuba has assumed responsibility for paying for the stay of the sick children and those accompanying them.

As a whole the aid offered will make it possible to send 42 children with various diseases to Cuba and Germany. Five mothers and five physicians will accompany them for internship and enhancing their skills.

However, taking into account the increase in airplane tickets on Aeroflot from Moscow to Havana and Berlin, the high expenses for the entire group of children and those accompanying them will be 1,731,104 rubles. The Kazakhstan Ministry of Health does not have these funds.

The children's parents are not in a position to pay for the treatment of their children either. Therefore, I am asking all the entrepreneurs and factory and organization directors to help by making their contribution to the charitable fund "Child in Trouble—Leukemia!". The account number of the charitable fund is 700161203/700904 in the AKB of the Tekhnopolisbank in Alma-Ata. The hard currency current account is 67084/702070089 in the Kazvneshekonombank in Alma-Ata.

Premier Orthopedics Institute on Brink of Collapse

*927C0402 Sankt Peterburg SANKT
PETERBURGSKIYE VEDOMOSTI
in Russian 18 Feb 92 p 2*

[Article by E. Kozlova: "Rub Aladdin's Lamp!"; first three paragraphs are source introduction]

[Text] The G. I. Turner Scientific Research Institute of Pediatric Orthopedics—a pearl of domestic medicine—is perishing.

Sick children are gasping for breath in the darkness of the wards: instead of two or three people per ward, there are 10—and along with them are 10 mothers. In those kinds of conditions, the children are still learning: amid all the crying and laughing, amid the groans that emanate from the recovery room, classes are going on.

The ancient buildings can't take the overpopulation or the burden of its own age, and the construction of the new building that has been under way for years has again been frozen—no money.

The waiting list for operations has been long for many years, and the institute simply isn't in a position to help all its patients: It has a wretched operating room in which there are a total of four operating tables, and nearly 10 operations are performed there a day.

But that's not the only reason that sick children lie here for a month and a half to two months at a time waiting for an operation. Operations are postponed for the most banal, incomprehensible-to-the-mind reasons. For months at a time, for example, clean sheets may not be delivered or there may be no hot water (the children go to the operating room dirty!), or the heat may be turned off.

The elevators have long been dead, and after operations, mothers carry their own children on stretchers from floor to floor.

The institute's staff is itself astonished: It's only by the grace of God that a dysentery epidemic hasn't broken out in such unsanitary conditions and that the institute has been lucky enough that no mother has ever tripped and dropped a child just coming out of an operation.

They're ready for all kinds of hardships and deprivations, these mothers are, who come from various cities and wait with their children for the operations. Having left their families and other children behind, they huddle in corners in rooms in the city of Pushkin and in nearby settlements, and they pay fantastic sums to spend the night in them just so their children can get well. They come here thinking they're coming to the best clinic in Russia, but, as if in a time machine, they arrive in a place that's from a century ago, a place that's in poverty and squalor.

They don't suspect that the glory of the country's largest medical center—the only pediatric orthopedics center in the whole world, a center whose physicians have a shining reputation—is being supported today by just the enthusiasm of those physicians and specialists. There's only one reason for that: The institute is naked and poverty stricken. The physicians themselves even make the instruments that are needed for the operations. Surgeons are forced to work with the most primitive of instruments, such as ordinary gouges, even though nobody in the rest of the world uses gouges anymore in orthopedics. To remove plaster bandages here, they still use the scissors designed by the great Pirogov back in the 19th century. Even though ultrasound has long been used in the most backward of countries, like those in Africa. (By the way, an event that was truly fortunate for the institute led me to the institute: The Leninets Association manufactured two sets (!) of surgical instruments and gave them to the institute. They were built on the basis of specifications submitted by physicians A. Krasnov and A. Bolabovko. Of course, the surgeons were extremely thankful to enterprise designers V. Lastochkin and V. Smirnov and to the association director A. Turchak. And it's understandable that the physicians wanted to thank the industry people publicly, through the newspaper.)

The equipment in the institute is old and is constantly breaking down. Here, studying grave medical problems like the unusual fractures of the spinal column or other bones that are occurring more and more frequently among children and are associated with a disturbance of the ecological balance of minerals in the environment require sensitive biochemical tests. And those tests are being performed, but how... After all, the institute's biochemistry laboratory to this day has to struggle to operate. Why, the institute's specialists are always begging for things from colleagues from other science facilities.

It's hard to believe that unique operations are performed here under those conditions. But they are. For example, the doctors perform this kind of miracle here: Toes are transplanted from feet to hands. That marvelous technique was developed by the pediatric microsurgeon "from God" Igor Vladimirovich Shvedovchenko. After seeing the technique, foreign specialists are in total admiration of him, and they are amazed that the operation takes just a little more than two hours.

This huge treatment center (it holds 600 children) has 10 departments, and each department has specialists who have made their mark with something new in orthopedics. Such specialists include Mikhail Pavlovich Konyukhov, Yuriy Ivanovich Pozdnikin, Arkadiy Nikolayevich Mikiashvili, Yegor Seliverstovich Tikhonenko, Vadim Petrovich Melnikov, and dozens of other physicians. In the institute, they perform magnificent hip operations that involve restoration of its functions; they do remarkable work involving orthopedic surgery for the spinal column; they have created pediatric foot surgery and an unusual technique for treating burns.

And here, on the eve of its 60th anniversary, the institute stands on the brink of collapse.

But then, none of the institute's problems sprang up in the past month or even in the past year. They have accumulated and gotten worse over all the years during which Professor V. L. Andrianov has headed the institute. What, specifically, has been done by the director to save the institute? Was entering into the small, recently set up enterprise Vidiana, perhaps, enough? But for now, it takes more from the institute than it gives, and it will hardly be able to solve the institute's economic problems.

At the same time, the treatment center physicians' arsenal includes dozens of studies, inventions, and new treatment techniques that the West would pay millions for. But Russia needs the institute. And in turn, the institute, rich and poor at the same time, needs assistants—enterprises (the physicians are prepared to provide their services to them) and sponsors. It needs business contacts with foreign firms. Those ideas are maturing in the institute, but they're still not really bearing any fruit. And a number of leading staff members of the institute can't help but have doubts about the capabilities of the director of the institute, V. L. Andrianov, an excellent surgeon, they assert, but someone who doesn't know how to steer the broken-down ship—the Turner Institute—into the sea of the market.

Three years ago, the Turner Institute was visited by the distinguished member of the International Orthopedic Society Allan McElvey [Makkelvi]. In his address to that society, a copy of which was sent to Health Minister Ye. Chazov, he said this: "The institute looks like a run-down factory, but inside, I saw some impressive things. I was amazed by the work done in the institute's experimental laboratory headed by Dr. Sci. G. I. Gayvoronskiy. (That remarkable scientist actually lives there, right in the laboratory, along with the rabbits—he doesn't live anywhere else. The clear contrast between the institute's gray walls and what goes on inside reminds one of a magical Aladdin's lamp."

So who will, in fact, help the institute? Just who will ultimately "rub" that lamp?

I think the first who should provide the answers to those questions is, of course, the municipal council's health-care committee.

U.S.-Russian Cooperation in Pharmaceuticals Manufacture

927C0404A Moscow IZVESTIYA
in Russian 6 May 92 p 3

[Article by Matvey Glebov: "American Pharmaceuticals Produced in Moscow Suburbs"]

[Text] A two-story shop built by America's Bristol Myers-Squibb, one of the trinity of the world's leading pharmaceutical firms, had its grand opening on 4 May in the

Moscow suburb of Kupavna on the territory of the Akrikhin production complex.

Russia's first pharmaceutical production operation corresponding completely to all international standards has only two types of products. These are Corgard (Nadolol) and Capoten (Captopril), recognized as just about the world's best drugs for controlling hypertension and cardiac insufficiency.

A package contains 40 tablets. Working in a single shift, and producing more than 100 million tablets per year, the new shop will begin work without our usual period of introduction and start-up. It will make drugs from Kupavna widely available.

FORTUNE rated Bristol Myers-Squibb, which had a sales volume last year of \$11 billion, among the top 20 supercompanies on its famous list. Plants in 53 countries and a scientific research funding rate of \$2.5 million daily (!) raised this New York firm to the position of world leader in production of antibiotics, pharmaceuticals for cardiovascular and cancer patients, and therapeutic baby food.

Akrikhin is setting the tone for pharmaceuticals in Russia. Sections have now appeared beneath its roof in Kupavna containing processing, vacuum, pneumatic transport, mixing and packaging equipment, automatic washing machines, a company quality control laboratory, air conditioning, compressed air and dust trapping systems, a water demineralizing system employing ion-exchange resins, and warehouses for raw materials, packaging materials and finished products.

Jeffrey Lak [transliteration], general director of the pharmaceutical group of the American company in the CIS, noted that he was extremely impressed by the very high interest shown in the work by Akrikhin director Ivan Tulyayev. Nonetheless two product quality control and production quality specialists from the United States will remain here for another year and a half in order to fully train our colleagues in the Moscow suburbs.

On the eve of the opening of the new shop, the partners signed a protocol on plans for possibly building capacities at Akrikhin producing tablets and vials of pharmaceuticals for injection for cancer patients. The Americans do of course hope that Russia will be able to subsidize some part of this new project.

Danish Pharmaceuticals Donated to Russia

927C0404B Moscow KURANTY
in Russian 24 Apr 92 p 2

[Article: "To Us This Is an Invaluable Gift"]

[Text] Svetlana Bocharova, director of the press service of the Russian Charity and Health Foundation, reported to KURANTY that a truly invaluable cargo reached Moscow by special shipment from Copenhagen. Denmark's Bakter Healthcare Corporation [transliteration]

and the American philanthropic organization AmeriCARES sent medical drugs for the treatment of hemophilia worth a total of over \$1.255 million.

The pharmaceuticals will be transferred to the department of reconstructive orthopedics of the All-Russian Hematological Center.

Municipal Problems Institute Created in Kursk

927C0404C Moscow RADIKAL in Russian
No 15, 1992 p 11

[Article by Mikhail Leybelman: "To Render Harmless and Sell"]

[Text] High hopes are being laid in Kursk on establishment of the scientific industrial commercial association called the Institute of Municipal Problems. This is an organization of a new type, and apparently one of the first in Russia, if not the first.

The founders of the Institute were the city administration, the TEMP Association, Ekotoksitsentr, the Institute of Chemical Physics of the Russian Academy of Sciences, and the International Federation of Public Expert Commissions. Authoritative specialists and money can be attracted as a result. The organization is commercial, and it will live only off of earned assets.

"What are the goals of the Institute?" I asked the director, Candidate of Technical Sciences M. Rudnik.

"We are working in the area of ecology, biotechnology, public health, and safety of the human habitat. Our main goal is to develop and, of course, implement resource-conserving production procedures and methods for recycling industrial and domestic wastes, and to plan the reconstruction and construction of nature-protecting facilities. We are drawing up recommendations on sensible use of natural resources, and we are establishing the conception of a comprehensive ecological survey of Kursk.

"The association's staff is extremely small. We are bringing in authoritative specialists from Moscow, St. Petersburg and the Urals, and scientists from Kursk's VUZes.

"The Institute already has some things to offer. Jointly with TEMP it designed local compact liquid waste treatment modules. They can be hooked up to any operating system. Fats, petroleum products, fibrous substances and so on can be extracted from wastes to a level of 90-96 percent.

"Production of such devices has already begun in Kursk. The first will be used to treat the infamous subterranean lake, in which over 100,000 tons of petroleum products have accumulated. Orders for half a hundred devices have been received from Kursk, Kharkov, Rovno and other cities.

"We can also offer an original procedure for treating the liquid wastes of metal-plating shops. There are colossal dumps in Kursk, as everywhere else. The 4.5 million ton ash heap of TETs No 1 is literally a Mont Blanc. Each year the casting shop of the tractor spare parts plant delivers around 80,000 tons of 'scorched earth.'

"In the meantime these wastes are excellent raw material for various construction materials. The first samples of heat-insulating and roasting-free self-hardening materials for wall blocks are already available."

Contact telephone: (07100) 2-16-09.

Medical Equipment Plant Seeks Assistance

927C0405A Moscow *MEDITSINSKAYA GAZETA*,
in Russian 3 Apr 92 p 4

[Article by Yuriy Stepanov; under the title "Sure the Struggle's Going On, But There's Still No Medicine"]

[Text] There is a small enterprise in the capital's Babushkinskiy Rayon, the Moscow Pilot Plant of the All-Union Scientific Research Institute of Biotechnology, the main structure of the "Biotehnika" Scientific Production Association. About 90 people are working at the plant, and they are producing highly useful products: a ginseng culture for the perfume and food industry, and the alga, *Spirulina*, which goes into the production of antitumor preparations. Also manufactured here are units for ultrafiltration and electrodialysis and biochemical filters for the purification of blood, which are not inferior in quality to foreign products purchased for currency, and much more. For a while everything here went along well, but as soon as the decision regarding the beginning of privatization was announced in Moscow, the plant collective established the following at a general meeting: Once production produces real profits, they would, since they were obtained through the efforts of the workers, belong to them alone.

It turns out that the scientists are not at fault here.

The workers at the "VNIIBiotehnika" developed the technology for growing the ginseng culture and have the patent for it. Together with the workers at the plant, specialists of the main institute worked on the reinstallation of the departments, set up the new equipment, and assisted in the launching of the production line. And now, all of a sudden they have turned out to be superfluous spongers, living off the hard-earned calluses of the working class.

Another example is this. Until very recently diagnostic preparations were purchased abroad: We did not have similar products. Specialists of the "Biotehnika" Scientific Production Association [NPO] were able nevertheless to arrange the production of some types of diagnostic preparations themselves. Now the plant workers are saying: Your laboratory can stay on our premises and work on its own problems, but from today on, production belongs to us. Scientific workers at the Institute and

Director General of the "Biotehnika" Scientific Production Association, Doctor of Technical Sciences A. Karpov, have tried to appeal to reason, to logic: What sense does it make to break up a unified technological system, to throw monkey wrenches into the wheels of the developments of new, promising pharmaceuticals, laboratory instruments and devices?

Alas, in vain. Moreover, V. Skudnyy, Director of the Pilot Plant, sent a letter to the Ministry of Industry of the RSFSR about the enterprise leaving the "Biotehnika" Scientific Production Association of the Ministry of Health of the RSFSR. The letter contained a request that it be taken under the wing of the Ministry of Industry. But since the Pilot Plant is a subdivision of the Institute, and does not have at its disposal a clearing account nor legal status, this question was not resolved at the Ministry of Industry.

The Institute continued to look for a way out of the strange situation that had been created; one of these was the formation of a joint-stock company. It would seem that a point of coincidence of the interests of the two collectives had been found: Let both become equal partners, since they are now so closely connected through the production of products. But this approach also did not suit the plant workers; only complete independence would do.

And, at that point, they finally shifted from their previous threats and got down to business; they held a "strike Italian-style", i.e. everyone comes to work ... no one does anything. However, this "foreign" variant did not last long, and our home-grown measures were soon added to it; the scientific workers who were working in the laboratories on the premises of the enterprise were prevented from getting to the work sites, and in essence were drawn into the strike. Then the Director General of the Association was compelled to go to the Director of the Pilot Plant with the request that the scientists and specialists be allowed to perform their job duties. And again, there was refusal.

The Russian-style revolt is continuing for a fourth month! This is latest news: Neither materials nor equipment are being issued by the warehouse to the plant laboratories. There is no heat, the boiler is no longer working, and there is no electricity; the switchboard room is under lock and key. In the morning the temperature in the plant facilities is almost below freezing. And the refrigerators, on the other hand, are beginning to defrost, and expensive preparations, strains, and reagents in them are being destroyed. Due to the fact that it was not issued solvents, one of the laboratories did not conclude a contract with a customer for 500 thousand rubles. There are several such laboratories in the institute. And they are compelled to remain idle, and not to produce pharmaceuticals.

The ultimate aim of the workers of the Pilot Plant would seem clear: freedom, privatization. But why then does

the question linger: Is it possible to be free and independent of His Majesty Common Sense?

Diagnostic Centers To Open in Kazakhstan

927C0406A Alma-Ata KARAVAN, in Russian
24 Apr 92 p 4

[Article by unattributed author; under the title "Diagnoses Will Be Established. Then the Treatment Will Be Carried Out"]

[Text] The government's concern regarding the deteriorating health of the residents of Ust-Kamenogorsk should finally become real in the coming month of May.

The handing over of a first-rank diagnostic center, the need for which has been discussed for a long time, is planned in fact in May. It is noteworthy that the equipment will be delivered by the American company "Cameron Associated". But the oblast does yet not have the required six million dollars. And therefore it is asking the government to lend it the money.

And apparently the government will not refuse the request, because it knows what the situation is like today in connection with the health, or more precisely the ill-health, of the people of Vostochno-Kazakhstanskaya Oblast. Thus, the average life span has fallen here in the last decade, and the natural growth in the population is the lowest in the Republic. The number of oncohematological patients has increased annually (six times higher than the Republic figures, and three times higher than the figures for Semipalatinskaya Oblast). Specialists have confirmed that the radiational and toxic environment has led to a change in the immunological and genetic state of people. And on top of all of that, 120 residents of Ust-Kamenogorsk have suffered as a result of the recent accident in the beryllium industry.

As a result, people who live and work here have paid dearly for the lack of concern for them.

Kostroma Registers First Scurvy Cases in 25 Years

927C0407A Tashkent PRAVDA VOSTOKA in Russian
2 Apr 92 p 1

[Article by Itar-TASS correspondent: "A Disease That Has Not Disappeared"]

[Text] Scurvy has been registered in Kostroma. In commenting on the first and, thus far, only case in the last 25 years, experienced physicians maintain, not without basis that by far not all young physicians can make the correct diagnosis at the present time. It seems that this disease, which it seems has been forgotten, has not disappeared, and did not sink into oblivion. It is recommended that people susceptible to this disease revise their diet and include more vegetables before summer comes.

Medical Strikes Continue

927C0407B Moscow SOVETSKAYA ROSSIYA
in Russian 8 May 92 p 1

[Article by O. Cherkovets: "Indigent Followers of Hippocrates ... Russian Physicians' Strike Continues"]

[Excerpts] The annihilation of personnel must stop.... This is what striking medical personnel of Moscow, as well as 70 Russian territories, are talking about. Their chief demand, which is addressed to the Russian administration is to restore 100 percent government financing of hospitals, polyclinics, medical centers, institutes and other medical institutions over the period of all economic reforms. Raising the wages of medical workers to the average level of those employed in industry is only the second issue.

Indeed, Yeltsin's government, which remained in power thanks, to a considerable extent, to fattening workers in some groups, regions, and even entire sectors of industry by means of constant raises, left the entire social sphere to the mercy of fate. And it is not only in the matter of wages (in Moscow, it averages 774 rubles for medical workers.) They were abandoned in complete conformity with the "recommendations" of the International Currency Fund, the first of which is a "steep" reduction of the national budget deficit. [passage omitted]

The coordinating council of the "Workers' Russia" declared its complete support of the valid demands of striking health care workers and appealed to all Russian workers to support the medical personnel. [passage omitted]

Official on Prospects for Health Ministry's Fourth Directorate

927C0408 Moscow ROSSIYSKAYA GAZETA
in Russian 22 Feb 92 p 6

[Interview with Vladimir Konstantinovich Vakulin, chief of the medical treatment association of the Russian president's administration, by Vitaliy Kovalenko, under the rubric "Toward Insured Medicine": "Sivtsev Vrazhek Has Fallen, and So Has Granovskovo"; first two paragraphs are source introduction]

[Text] You wouldn't recognize Granovskovo Street. The ZILs and Chaykas that at any given time of day used to pack that short little lane in the center of Moscow are gone. There's no one to ferry around—since 1 February, the 24 families of high officials of the former USSR have been detached from the "special division" located there. One of the bastions of the old power structure has fallen quietly and unnoticed.

And what is the fate of the entire system of the former Fourth Directorate of the former USSR Ministry of Health? I asked Vladimir Vakulin, the chief of the medical treatment association of the Russian president's administration to tell us about that.

[Vakulin] First of all, I think, it needs to be said that the system of *nomenklatura* medicine has taken a dramatic "turn for the worse." A large group of polyclinics, hospitals, and other facilities have left the Russian Ministry of Health and the Moscow City Council. Sanatoria, two each, have been transferred to the Russian Fund for the Afghanistan War Disabled and trade unions. Four health resorts have been reorganized to provide treatment and recreation for World War II veterans and disabled, and large enterprises have accepted a number of sanatoria. In all, 32 medical establishments that used to belong to the Fourth Directorate and business managers of the CPSU Central Committee have acquired new bosses.

[Kovalenko] What about qualitative changes? Several months ago, ROSSIYSKAYA GAZETA published an interview with you that spoke of the "denomenclaturization" of medicine, in particular. Have the trends that you pointed out back then grown?

[Vakulin] *Nomenklatura* medicine used to be propped up by two titans—a caste system and unnatural economics—when the powers that be, like everyone else, got everything for free, only what they got was an order of magnitude better than what the rank-and-file citizens got. Today, the cornerstones of both those components have been knocked out.

Take, for example, the special division on Granovskovo that we just eliminated. Only the members of 24 families had access to the four-story building that housed a hospital, a polyclinic, and a children's division. No mere mortals were allowed to get close to it. Now more than half of the 80,000 people who get treatment in our three polyclinics and our hospital are those same mere mortals. And about the trends: If this past fall, our association was under contract to serve some 300 enterprises and organizations, today that number stands at 635, plus 15,000 war and labor veterans, Chernobyl victims, and individuals who had suffered repression. Little of the caste system remains, as you can see.

Yes, the other half of our patients are deputies, government officials, managers of large state establishments—the *nomenklatura*, in the context of what existed before. However, I don't see anything unfair about their getting good medical treatment. Because in economic terms, they are essentially in the same position as those whom we treat under contract. And if six months ago, we could provide an individual the full range of services—polyclinic, hospital, sanatorium—for 3,000 rubles [R] a year, and now the polyclinic service alone can barely be provided for R6,000, it has affected the state official the same as it has the lathe hand or the engineer. To be more precise, as it has the enterprise or organization where the individual works and which is forced now to invest higher fees with us for his treatment, once a liberalization of prices has dictated that rise to us.

[Kovalenko] In other words, you have already entered market conditions completely?

[Vakulin] No, unfortunately, we're only just beginning. The market requires that we conduct all our economic activities skillfully and in a balanced manner. Let's say, our pensioners and Chernobyl people—and remember, there are 15,000 of them, which is about 20 percent—are treated for free. That means, we need to find income sources that will cover those outlays. One way is the special building on Granovskovo. The level of service is very high there, the equipment is excellent, and we have calculated and are sure that 1,500 people, instead of 24 families, can be under treatment in that building. For high fees, of course. Some of the profits from that can be redistributed into our unprofitable areas.

A really complicated problem is hard currency. It's no secret that our equipment is mainly imported equipment. We need spare parts, we need medications. Every year, the Fourth Directorate used to receive \$20 million. Last year, it wasn't given a cent, and this year, the situation is also unclear. The hardware is already starting to break down, and it wouldn't take long before not even a trace of our vaunted potential to be left. We need to be earning money on our own, that much is clear.

[Kovalenko] And what, in your view, are the most difficult problems awaiting the medical profession on the road to market conditions?

[Vakulin] There are two, as, by the way, there are with any enterprise. The first involves property. When we were sitting on the budget and knew only one word, "Gimme," we didn't have any need for any property at all. But all it took was our starting to have to earn money, and we were up against the wall immediately. That's only one angle.

We have some very high-powered medical people who are, without exaggeration, of world renown. Germans and Americans and French would gladly be treated by them. But we need to organize that business: set up some good advertising, arrange for people to come here and stay. There are firms in the West that do that kind of thing professionally, and they're ready to do it all for commissions that are, by the way, quite modest. We've had several meetings, and all of them have ended almost the same way: "Whom do we make the contract with?" "With us." "But who are the owners?" "The State." "Forget it..."

[Kovalenko] But there's also the possibility of this kind of scenario: They transfer the property to you, and you take it and sell it.

[Vakulin] I'm not about to pretend that there aren't those kinds of problems here. But I am firmly convinced that you can always ask for something from a property holder. But in a situation like the one we're in now, that's when the conditions favorable to selling off really come up, and that's not just a hypothesis. We have two sanatoria in the Crimea—the Nizhnyaya Oreanda and the Morskoy Priboy. Taking advantage of some of the uncertainty of the circumstances, they quickly organized a joint-stock company there and got out, as it were. Now

a genuine lawsuit has to be brought, to return the property to its rightful owner. Which is why the sooner the State Property Commission decides the problem, the greater the probability the property will be preserved—both in terms of the objects themselves and from the standpoint of normal operation and timely renovation.

[Kovalenko] OK, and the second problem?

[Vakulin] Personnel. Medical people have always traditionally been funded by budgets. And now they have to learn to earn their way. In accordance with the law "On Medical Insurance for the Citizens of the RSFSR," starting next year, all medical establishments will exist on the basis of insurance agreements and will receive fees for their services. It's a step forward, to be sure, and it's the only way we can institute normal financing for our medicine. The people will gain from it for sure, and I have no doubt that we will have a good many competitors within several years. But the medical people themselves will have a hard time of it. The difficulty is made worse by the purely ethical aspect of the situation—you can't think about economizing when it comes to health, and especially an individual's life. But at the same time, you have to constantly be finding additional services for which people will agree to pay. And you can't overdo things, go too far. It's not at all simple, or fast, but it's an unavoidable process.

[Kovalenko] Vladimir Konstantinovich, how did the clients of the special division on Granovskovo react to their being detached. Gorbachev, in particular?

[Vakulin] I don't know. They just stopped coming, and that's all. Oh, there was one fellow who waved around various papers and insisted that they preserved his right for special service. But there wasn't any way we could help him.

[Kovalenko] Can you say who that was?

[Vakulin] I can't say. Why?

[Kovalenko] Which polyclinic is Yeltsin attached to?

[Vakulin] None. And I feel that that's wrong. The president of Russia is not a private citizen. We all have an interest in his health, his efficiency. And the medical care he gets simply must be the very best.

Interview with President of RAMN Congress 'Man and Medicines'

927C0409A Moscow NEZAVISIMAYA GAZETA
in Russian 25 Apr 92 p 6

[Interview with Aleksandr Chuchalin, president of the congress of Russian Academy of Medical Sciences [RAMN] academicians, by Dmitriy Frolov: "The Problem of Medicaments Will Not Be Resolved Soon ... but Much Is Being Said About Them"]

[Text] It is quite apparent that the First National Congress on "Man and Medicinal Products," which convened in Moscow from 12 to 16 April and has become the first large-scale action by the Russian Human Health Fund, had many chances to become an extraordinary event. This is attributable to several circumstances, but mainly, of course, to the fact that the matter of shortage of medicines, their quality and assortment is more acute today than ever before.

"As yet no one has completely objective and organized information on this score," declared Aleksandr Chuchalin, president of the congress of RAMN academicians. "We only have data concerning some positions, and our task was to integrate and analyze them. In the course of the work of the congress this was the topic of more than 50 symposiums, and each of their chiefs reported on the findings on the last day. Thus, the list of products of vitally important products is virtually ready. It should serve as the basis of the national program which defines government policies in the area of medicinal products."

Such congresses are organized in all developed countries. They make it possible to be governed by the opinion of authoritative and competent experts, rather than bureaucratic decisions made deep in the ministries. As a rule, these are very short-term and, consequently, viable programs that can detect the different fine changes in the situation and offer clear-cut recommendations as to how much and which medications are needed, and how to distribute them wisely. Our congress was called upon to prove the necessity of this method of problem solving. We are the largest producers of some products, but as for quality. ... It seems that it is not so easy for us to build pharmaceutical enterprises, and this means that funds have to be spent on the purchase of plants and technologies.

[Frolov] This has been the case and, unfortunately, ended sadly. As an example there is the plant for production of dialysis equipment in Borisov, which never was able to work with our raw material.

[Churchalin] And this indicates once more the level of competence, or more precisely, of incompetence of decision-makers. We need to have expert evaluations by people responsible for effectiveness of implementing projects that they recommend, be it construction of a pharmaceutical plant or procurement of a batch of products.

[Frolov] Of course, we are always discussing imports. And it is no secret for anyone that the expanse of the Russian market constitutes an arena for intensive battle of western pharmaceutical firms. It would be, to say the least, frivolous to take the stand of an observer....

[Churchalin] In this situation, sometimes even the smallest expenditures that could be classified as representation expenses could open the way for millions of contracts. Representatives of firms realize this full well and take the utmost advantage of all opportunities. For this reason, the congress addressed a request to the

World Health Organization and Professor Hayes, advisor to President Bush, who had headed at one time the famous Food and Drugs Administration, which monitors the quality of foods and drugs, to establish independent commissions of experts. It is imperative to be exceptionally attentive and objective in the choice of a partner, and to make every effort to preclude corruption.

[Frolov] You keep returning to the need for consultations when making government decisions. But on the day before the congress convened, when I phoned the Ministry of Health, a government agency that, it would seem, is the most interested in such recommendations, I learned they did not know about the congress. Can this be interpreted as a symptom?

[Churchalin] At first, we were indeed ignored. But in the course of our work the attitude changed, and at its conclusion many ministry workers concerned with the drug supply praised the congress. It is significant that the minister was present on the last day of the congress and even the president sent a greeting to its participants. I think that we achieved our main goal, that of convincing them of the seriousness of the problems we discussed.

[Frolov] As for the president's greeting and minister's visit—the cause-and-effect link is understandable, and do you seriously believe that the importance of the problems was previously misunderstood?

[Churchalin] The process of selecting those who advanced to the level of making government decisions was impaired. Society needs people with a different understanding of modern processes and means of resolving difficulties that arise. But in organizing this congress, our intent least of all was to have a confrontation with anybody. The main purpose would be to have a folio entitled "National Program for 'Man and Medicinal Products'" lying on the table thanks to the successive steps made toward one another.

The prospects of such a folio, which do not signify the appearance of the drugs listed in it, will probably be unable to give hope to many patients who need them. However, it is just as naive to expect the congress to provide practical solutions of the problems as to expect the congress of people's deputies to improve the quality of life. And, of course, one should not forget that drug support and chemotherapy do not yet constitute all of medicine. This was eloquently indicated by the data submitted in the speech to the congress delivered by Academician Sergey Navashin: Only one-tenth of the cost of treating pneumonia in the United States is referable to antibiotics. The rest is spent on diagnosis, laboratory tests, physiotherapy, nutrition, and wages of medical personnel.

Ecological Conditions in White, Barents Seas 'Catastrophic'

927C0410A Moscow *RADIKAL* in Russian
No 15, 1992 p 11

[Article by unattributed author; under the title "Dirt That Kills"]

[Text] A ecological catastrophe has struck in the White and Barents Seas; thousands of Greenland seals have been afflicted with malignant blood diseases. The character of the changes in the organism of the animals points to prolonged toxic and radioactive exposure.

Arkhangelsk scientists who have been engaged in the study of the causes of the mass death of starfish in the White Sea in May, 1990, have reached that conclusion. At that time the waves had washed up not only millions of invertebrates, but dozens of pinnipeds as well.

Yuriy Timoshenko, Director of the Laboratory of Marine Mammals of the Northern Department of the Polar Institute of the Fishing Industry and Oceanography (PINRO), assumes that the seals were killed by the effects of the nuclear tests on Novaya Zemlya and by the transformation of the coastal waters of this archipelago into a dump of solid and liquid radioactive wastes. In addition, chemical weapons, packed with sarin, yperite, and lewisite, have been buried on the bottom of the White and Barents Seas.

In the opinion of the scientists, there can be no question of the resumption there of nuclear testing on Novaya Zemlya, or even less of the organization of industries for the liquidation of chemical weapons, as has been proposed by representatives of the military-industrial complex [VPK]. It is urgently necessary to carry out operations to detoxify the lethal burials in the depths.

BALTMED Center

927C0418A Moscow *IZVESTIYA* in Russian
20 May 92 Morning Edition p 2

[Article by V. Nevelskiy: "Baltic Sailors Achieve World Level in Public Health"]

[Text] For decades the Baltic sailors have invested millions of rubles in public health with the hope of receiving medical care suitable for man. But they could not seem to change for the better: Enormous amounts of money disappeared without in any way improving the quality of services. They had to wait forever for physicians and lie in hospital corridors and over-filled wards. How could they talk about serious treatment if even an ordinary annual medical commission causes in many hours of nerve-rattling for the sailor?

And then the idea was born for the Baltmed joint stock medical company. Its founders were the Baltic Naval Steamship Line (BNSL) and the First Medical Institute. The authorized capital of the company is two million rubles. It includes, in addition to the currently operating

diagnostic center, a polyclinic, a 200 bed hospital, and a pediatric hospital. All of the economic security for this major complex is born by the steamship line. The contribution of the other founder is staff and intellectual potential.

"Our goal is to establish the highest level of medicine," says BNSL director Viktor Ivanovich Kharchenko. "Both outpatient and inpatient treatment here should be at least as good as what they have in the West. The lease of the enterprise freed us from the petty tutelage of administration and gave us the right to independently make decisions about how to raise money and what it should be spent on. It is this managerial freedom that has finally permitted us to face the people and make matters of social policy the cornerstone. Medicine has become one of the priorities of our activity.

"There are several excellent physicians in the city," continues V. Kharchenko. "We decided to invite practicing physicians to work in close cooperation with our best scientists. But first we had to acquire the newest technology. And we decided at that point to buy the most modern medical lines and unique equipment. The Naval Medical Center began to establish all new medicine for us without sparing any effort.

It can really strike the imagination of any specialist. There are very few first class foreign clinics that have such a selection of medical equipment. The newest ultrasound diagnostic units, stomatologic and denture equipment, a fibroscope, and a laboratory for rapid blood analysis. We cannot list everything. But we must mention the pride of the center, a fourth-generation General Electric computer tomograph that cost one million dollars.

Apparently we need to determine the source of all this wealth. The medical center was simply in luck when it came to accommodations. A three-story building was constructed by the steamship line as a dormitory, but then that idea was rejected. It was decided to equip the building as a diagnostic center since the BNSL had the resources according to the heavy repairs article, and a repair-construction trust could perform the work. This is why the redesigning, reconstruction, and finishing of the building took less than a year.

Building it was easier than obtaining the imported equipment. It was the custom in the naval forces that the sailors would not take a step without permission from above. All of the planned hard currency they earned and half of the takings that were over the plan were confiscated by the ministry. Only Moscow could determine how many dollars to allocate from the centralized assets for obtaining medical equipment. Then a special subunit of the Naval Fleet Ministry, the Sovbunker trade-mediating company, entered the picture. It used its discretion to make mass purchases of equipment for all steamship lines, or more accurately, for the basin hospitals and polyclinics, without even asking the physicians what they needed. If somebody protested, showing that

antiquated equipment had been purchased, and that it should be replaced with something else, the obstinate person tersely replied, "If you don't want it, don't take it. We will find others who do." The purchases of Sovbunker were a business in which the interests of medicine were not of primary importance.

After the transition to a lease, the Baltic sailors themselves had their profit at their disposal. And public health immediately felt the results of the economic freedom of the enterprise. The word of the specialists was final. If the physicians asked that something be bought with hard currency, it meant that they had a reason for it. Such was the position of the BNSL director, the lease enterprise council, and the trade union.

The physicians did not abuse this trust. Together they carefully weighed the advisability of each purchase.

The well-equipped center today can see up to 600 patients per day on the day shift. Half of its colleagues were previously on the BNSL staff. Many have worked side by side in the basin hospital for many years. The physicians and nurses taken from the side are literally counted units. Both young and experienced specialists consider working for Baltmed an honor. What attracts them? The working conditions, the newest equipment that no other establishment in the city has, and the special, very desirable, microclimate in the collective. What about salary? You would not call it high for such a prestigious establishment. It is true that Baltmed has something special about it. In addition to a guaranteed minimum salary, each colleague is given a certain percentage of the total cost of the services they render. "He who works better, earns more" is the rule in effect here.

There is no hint of a spirit of greed here. So attention to the person and readiness to help him is clear, and not only in the physicians' offices. It is a principle to which all literally adhere.

"The advent of such a center marks the first steps of alternative medicine," says Vyacheslav Aleksandrovich Shelukhin, general director of Baltmed. "It is as necessary to the country today as air is. Only in competition with new forms of organization of public health can official medicine, like any monopolist, rid itself of the chronic illnesses, the most serious of which I would diagnose as the state pushing the interests of the physician and patient to different sides. By establishing a joint stock company, we have achieved our goal: complete autonomy and freedom to act. We are able to completely immerse ourselves in the specific problems of naval medicine that had always been neglected. Incidentally, the major medical establishments of the city and prominent Soviet and foreign specialists have expressed the desire to cooperate with us in solving these problems. In giving people aid on a world level, we will make the physician an extremely respected person, cure him of his inferiority complex, and raise the prestige of the profession at the same time...

Yes, Baltmed is designated primarily for thousands and thousands of sailors. It is their health that concerns the steamship line. Costs have been set that are fully acceptable by today's standards for patients who come in off the street. For example, ultrasound diagnosis of the abdominal cavity costs 170 rubles, 90 rubles for thyroid diagnosis. The cost of laboratory biochemical analyses ranges from 22 to 30 rubles, examinations for rheumatism are 25 rubles. It costs 97 rubles for gastroscopy, 75 rubles for therapeutic urological procedures, 85 rubles for acupuncture in the Eastern medicine office, and 154 rubles for treatment of alcoholism and smoking. The costs in cooperative and small enterprises are a commercial secret, but it is clear that they are several times higher.

Incidentally, 95 percent of these patients "from the side" are served without cost; it is covered by written order of the enterprise for which they work.

Directors from the Kirov Rayon Council recently asked Baltmed whether it could organize in its free hours the free care of the poor and invalid residents of the rayon. The physicians immediately responded to the request.

As you see, it is not a caste, elite establishment. The success of Baltmed is in coming out of the dead end that has flogged our national Soviet medicine. Will the unique instruments, newest medicines, and tender smiles of the physicians and nurses be accessible only to those with a tight purse?

No. It seems that even in the hard world of a market economy we can find the path to first-class, democratic medicine with a face that smiles on all.

Everything that the medical center earns goes to support scientific research and clinics of the First Medical Institute and for the advancement of public health at the Baltic Naval Steamship Line. I think that it will have a long and happy life.

Uzbekistan: Ecology, Health Association Formed

*LD0806064192 Tashkent Radio Tashkent Network
in Russian 0300 GMT 6 Jun 92*

[Text] In Uzbekistan an Association for Ecology and Health has been formed in the Republic of Uzbekistan to study the various illnesses associated with ecology and upsetting of the balance in the ecosystem. In Uzbekistan there are 43 doctors to 10,000 people, in the United States 23 doctors, and in Japan 18 doctors. The hospitals in Uzbekistan can stand alongside those of advanced countries in equipment and staff. This, however, has been unable to tackle certain problems. Uzbekistan in terms of infant mortality occupies 75th place in the world.

Poliomyelitis Institute Stops Production of Polio Vaccine

*LD3103103892 Moscow Radio Rossii Network
in Russian 1900 GMT 30 Mar 92*

[Summary] The Moscow Poliomyelitis Institute needs 1 million dollars worth of assistance. Due to the economic situation it has halted production of the vaccine against polio. This was announced by WHO, which said that this institute was the only one producing the vaccine for the CIS countries and Eastern Europe.

Moscow Poliomyelitis Expert Assails Aversion to Vaccination

*PM1202150192 Moscow ROSSIYSKAYA GAZETA
in Russian 8 Feb 92 First Edition p 8*

[Report by Mariya Nikolayeva under the general heading "Rumor Has It... But What About the Facts?": "Children in Risk Group"]

[Text] The newspaper's editorial office received a report on a possible outbreak of poliomyelitis in Moscow. This rumor was fired by yet another alleged shortage—vaccines for immunization. Its production requires biological material from monkeys, but unfortunately we do not have the currency to purchase this substance. Thus, only one in three children under the age of one is vaccinated against poliomyelitis.

Our correspondent asked Dr. V. Mironova, epidemiologist at the Moscow City Center of the State Sanitary-Epidemiological Inspectorate, to explain.

"Poliomyelitis is the the most serious of infectious diseases. It strikes at the whole organism, but especially the skeletal and motor [oporno-dvigatel'naya] system. The disease often progresses with various complications and, worst of all, it is actually incurable. So it makes more sense to talk about preventing rather than treating this truly terrible ailment. The most reliable means of protecting oneself from the virus is regular vaccination. Incidentally, it is quite painless—the vaccine takes the form of a pink liquid and enters the body through the mouth. The vaccinated child develops a stable immunity—the guarantee of a continued healthy life. The earlier the child is vaccinated, the lower the risk of infection.

"I have heard nothing about a shortage of vaccine, although it is well known that the number of nonimmunized children increases with every month. But the reason lies elsewhere. There is a rising incidence of parents refusing vaccination for no reason. This was prompted by what in my opinion was a damaging discussion initiated in the media a short while ago.

"If we are talking specifically about the vaccine against poliomyelitis, it has no side effects on the child's health. In many countries in the world children are vaccinated as a matter of course. There is no other way of protecting oneself from infection. So the actual question on the possibility of an epidemic breaking out is quite justified.

"We know of cases where a 'rogue' poliomyelitis virus has circulated among children in preschool nursery institutions.

Parents should think about the terrible risk to which they are exposing their children by refusing vaccination.

"There is a view that poliomyelitis is a children's disease, but if an epidemic should break out—God forbid—this disease will trample everyone in its path, regardless of age. But I must stress that only nonimmunized people constitute the 'risk group'."

Investigative Reporting on Sverdlovsk Anthrax Incident, Krasnoufinsk and Krasnoyarsk Mystery Illnesses

927C0441 Moscow KOMSOMOLSKAYA PRAVDA
in Russian 10 Jun 92 p 1

[Article by K. Belyaninov, V. Nedogonov, V. Umnov, V. Chelikov, Sverdlovsk Oblast, under the rubric "KP (KOMSOMOLSKAYA PRAVDA) Investigation": "If You Find Me Unconscious, Please Report It to the City of Sverdlovsk..."; Our Expedition Tracked the Clues of a Secret Biological War"]

[Text] On 1 May, as prescribed, the table was set. Klimov hadn't gotten through the first cup when two orderlies arrived.

"Have you drunk it all?"

"No," Klimov answered honestly.

And they took him away in the ambulance.

He had been expecting their arrival for almost a month—when his acquaintances began dying. Prokhorov died, and then Lozhkin, and then Romanov. People were dying on the trolleys and in doorways.

After comparing the facts, Klimov understood that he himself was the next candidate for the grave. It was taking those who lived or worked in Chkalovsk Rayon, near Military Base No. 19. In early April, Klimov went through military courses in a neighboring unit.

On 1 May 1979, he was vaccinated for anthrax. The physicians warned him that there could be complications: convulsions, cardiovascular disturbances, and even anaphylactic shock. In his passport, Vladimir Mikhaylovich wrote a note that he thought up right then and there: "If you find me unconscious, please report it to the city of Sverdlovsk, at this address..."

In the spring of 1979, in the CPSU Sverdlovsk Oblast Committee, an unhealthy situation developed. Alarming rumors about an epidemic were going through the corridors and smoking areas. When the alarm reached its apogee, the staff put together an address for First Secretary B. N. Yeltsin, so that he could inform the public.

Yeltsin agreed, and he set a date for a staff meeting.

On the appointed day, at the large oblast committee concourse, Boris Nikolayevich, trying not to stray from the paper, read a report from the rostrum about how in Sysertsk Rayon, a cow and a sheep infected with anthrax had been butchered and sold on the market, and that's how the epidemic had begun.

After he finished reading, he looked around the hall and said, "Any questions?"

The first secretary always proposed that questions be raised after his speeches, but he always remembered, long after, who it was who had raised the questions. So

there weren't any questions. Everyone dispersed, grew quiet and even more frightened.

He went to Base No. 19, but they wouldn't even let him into the supersecret area. Boris Nikolayevich, by his own words, didn't know what was going on there. "It didn't have anything to do with me," he later said, "but I knew there was something there. And that's all. But when the epidemic broke out, I saw to it that it was taken care of right away."

The illness developed too quickly for the official "isolated cases." And it was strange that the anthrax appeared in the spring, when the snow was on the ground, instead of the usual time—in the summer heat. According to the official data, 64 people died (now, by the way, related deaths are being announced, and the names of those people are not on the list that came out of the depths of the UKGB in December of just last year after inquiries by people's deputies.) Since then, only a few cases of anthrax have been recorded in Sverdlovsk Oblast.

"There are no documents whatsoever in the archives of our directorate, and never have been," said Dmitriy Kondratyev, deputy director of the oblast directorate of the Ministry of Security, who with that wiped away half of our questions. "The Chekas were in fact brought in to investigate the causes of the epidemic, but we didn't find anything substantial."

A number of detailed versions about the epidemic have sprung up. The first was that it was a terrorist act. No saboteurs, of course, were found; but at any rate they sent some American student—how he got there no one knows—out of Sverdlovsk. The student later wrote a "whole book" about the anthrax.

A second version was that the illness was "sent in" with imported equipment. Such things happened, in the words of Kondratyev, rather frequently. They would check the lathes that came into a plant, and they would find antisoviet literature or bags of gum. And once, in a railcar with Canadian wheat, they found a box, and in the box were strange ampules. It wasn't until about two weeks later that they figured out that they were rat poison...

When the official Moscow commissions confirmed that the source of the epidemic was infected meat, the people in the UKGB calmed down.

"According to the data of intelligence agencies and the testimony of individuals who emigrated from the Soviet Union, the outbreak occurred early on the morning of 3 April 1979 in the military Base No. 19 (?—Ed.). A cloud of spores went up into the air... The wind took the aerosol cloud to the south, which was lucky—otherwise, 1000 residents could have perished." (New Scientist, 1980)

Stanislav Alekseyev, head of the Center for Documentation of Public Organizations (formerly the oblast party

archives), could barely find a hint of the anthrax in the documents of the oblast committee. Back in those days, the bureau met twice a month. In April 1979, the priority issues were things like statistical reports, the preparations for the plenum of the oblast committee of the All-Union Young Communist League, and the presentation of awards for "Active Propaganda of Marxism-Leninism."

In May, there was a seminar of first secretaries of rayon committees about people's control...

Not a word anywhere about the anthrax.

"Any record had to go through the head of the protocol department on its way to the archives," Alekseyev explained now. "Part of his job was to screen out the most secret matters, and only he could carefully pull out a page or two from the folder. If, indeed, such a record existed at all."

Yeltsin, as his former colleagues recall, didn't like paperwork.

Nevertheless, in 1979, there was an individual living in Sverdlovsk who wasn't very afraid of what was going on. His name was Aleksandr Karenin. Seeing everyone rushing around the city, he recalled the summer of 1969, the sunburnt steppe, an island lost in the Aral Sea.

Karenin served on the island of Vozrozhdeniye—the only biological testing ground in the homeland. The job of the sergeant of the CW defense troops was very simple: deliver a vehicle carrying horses to the testing ground, and then don a gas mask and wait in the vehicle's cabin for the "article" [vehicle] to be "attacked." When the cloud had passed, he would take the horses to a unit to die, and then scientists—including some from Sverdlovsk—would take over.

Sheep were brought to the testing ground in boxes: A special opening kept them from hiding their heads, and the calculations of the specialists were based the notion that the sheep would inhale as much of the material as possible. There were also monkeys on the island, although Karenin, quite honestly, didn't see them. They weren't brought to the testing ground—they were sprayed with something right in the laboratories. The monkeys lived in style on the island: It cost 4 rubles 80 copecks a day to keep them there. It cost only 1 ruble 24 copecks to keep Karenin. But he and the other soldiers didn't complain about serving there. They would occasionally have shashlik from a sheep who hadn't been "gassed," and some soldiers weren't even squeamish about contaminated animals.

It wasn't until 10 years later that Karenin spoke about his service—in 1979. With the only difference that now people are playing the role of the horses.

The frontline physician Nikolay Babich reached Prague in 1945. He greeted the spring of 1979 holding the rank

of a medical general—the head of an oblast health department. But that April, he, like Karenin, felt like a private.

The anthrax outbreak was a sneak attack. The first corpses came in quickly, but the doctors were very slow—it took three days for an accurate diagnosis, and then they waited for enough vaccine to come from Georgia...

In his pocket, Nikolay Stepanovich [Babich] carried a piece of paper folded like an accordion, on which he wrote the new addresses of the anthrax. He traced the flows of sick people.

The dead, for lack of a crematorium, were buried in the clay soil of the Vostochnaya Cemetery, sprinkled on all sides with calcium hypochlorite. On paper, thousands of people were said to have been vaccinated with anthrax vaccine; word of mouth, however, put the figure at hundreds of thousands.

The USSR chief state health physician, P. Burgasov, came tearing into Sverdlovsk. He didn't rush to Base No. 19—people were surprised, not knowing that in the summer he was to fly to a congress in India, and all he would have to do would be to take one step into the secret area, and he would immediately be confined to the place.

Burgasov headed a commission of civilian medical people.

A second commission consisted of military medical people. It was directed by Ye. Smirnov, the chief of the Main Military Medical Directorate of the Ministry of Defense.

A third commission—headed by the first deputy Andropov—also didn't leave any visible clues.

A fourth commission was an oblast epidemic-control commission.

Every morning, a cavalcade of black Volgas would roll up to the oblast health department building (so many that the chiefs were eventually asked to ride several to a car, so as not to create a traffic jam in the narrow lane). But Base No. 19 kept silent. Were there sick people there? One night, Babich and Burgasov stole up to the fence around the base and took samples of the run-off water. They didn't find any anthrax, but then they themselves were "exposed"—the next day, a "well-wisher" showed Babich photographs of the nighttime sortie.

While the commissions of Burgasov and Smirnov were writing their secret reports, urgent telegrams were coming from Moscow. At first, they ordered the roofs washed—so they were washed. If the agent was there, it would run off onto the asphalt with the water.

After a few days, a telegram came saying change the soap, put down new asphalt, and remove the upper layer of soil. After that, they gave up on it.

Many of those who arrived rushed into the wards to the patients—they were collecting material for their dissertations. That's when the order came down from the center: No one is to be admitted.

As Nikolay Babich learned many years later, a unique brochure appeared on saving people from mass infection with the anthrax. It appeared alright, but only in manuscript, because the author didn't live to see it come out—the brochure was banned.

Only the epidemic-control commission of the oblast executive committee worked in the open—it was looking for contaminated meat in the Sysertsk Rayon, which is 40 kilometers south of Sverdlovsk. Everyday, the physicians of the oblast health-epidemiological station went out to the neighboring livestock burial grounds in search of the anthrax agent.

But the chief of the oblast UKGB showed up with a pistol and two strong guys with handcuffs in the office of the head of the oblast health department. They hauled out every single history of the disease, diaries, maps, and reports on the anthrax from the safe and put them into bags. For a finale, they even stuck the "accordion fold" from Nikolay Stepanovich's pocket into a bag.

Two month's of work and the unique training associated with saving hopeless patients (they had managed, after all, to pull several people out of it!) were forever buried in the entrails of the KGB.

Now the retired Nikolay Stepanovich Babich recalls with a smile how on the third day of the epidemic, at some meeting, a military commander suggested putting Babich in jail—"He overlooked the signs of the epidemic!"—and the second secretary of the oblast committee stamped his feet and threatened a trial.

Babich knew that that was no real threat to him at all.

It's instructive that although there was an epidemic of anthrax, not a single physician or epidemiologist (all of whom worked truly courageously, under the most difficult of conditions) was dismissed, and no reprimands or penalties were made. It was obvious that the epidemic was not their fault.

In July, a secret order came down: forget the anthrax. They say that the anthrax story came to light at the SALT-1 talks with the United States, and the Americans expressed their displeasure to Gromyko.

And when Nikolay Stepanovich Babich flew to the Black Sea to rest, people were curious and would ask, "What happened there?" And he would reply, "Nothing."

To the state advisor of the Russian Federation on Ecology and Health Care, A. Yablokov:

In reference to the inquiries by the deputies of the Supreme Soviet of the RSFSR...The materials of the investigation of the epidemic outbreak of the illness were of a "Top Secret" nature. For that reason, no official information has come concerning the causes of its occurrence, the number of individuals infected, or the number of people who died. All the records of the laboratory tests of the environmental samples and of the materials from the infected individuals and those who died that were kept by the laboratories of the Sverdlovsk Oblast health-epidemiological service were confiscated by the KGB and the military procurator's office, as were the epidemiological analyses that were done afterward.

The RSFSR State Committee for Health and Epidemiological Inspection does not at present have any official documents on the causes or the extent of the tragedy.

Ye. N. Belyayev, Chairman

November 1991

"We didn't destroy any documents," Dmitriy Kondratyev, the deputy chief of the Yekaterinburg Directorate of the Ministry of Security, assured me in May 1992. "We don't even have furnaces for that kind of thing in the directorate. We never had those documents at all."

Six months ago, presidential advisor Aleksey Yablokov telephoned the chairman of the KGB, V. Bakatin.

"The president is getting ready to investigate the causes of the anthrax outbreak in Sverdlovsk. He needs the archive documents."

"We'll find them by this evening," Bakatin promised.

But two days went by, and no news came out of the committee. On the third day, Yablokov himself telephoned.

"I can't do anything with my subordinates," Bakatin complained. "They can't find anything."

Several days later, the chief of the center for social relations of the KGB went to Yablokov. He brought a thick folder of documents stamped "Secret." It contained the reports of the Burgasov commission, with a detailed elaboration of the official meat version.

"Look them over carefully," the visitor advised. "There's something in those documents that will shed light on the truth. Our staff members back then let something slip by. Here, for example: In smears taken from a rug and a wall mailbox, the anthrax agent was found. If the source were meat, the agent wouldn't ever have been found on household items."

Recalling that strange visit, the head of the organization department of Yablokov's office, S. Revina is certain of this:

"He clearly read the real documents just before coming to us. For no reason at all, he suddenly conjectured that the source of the illness was cracks in the ventilation

filters of some "classified enterprise." He said that in the spring of 1979, after hard freezes, there were rapid warm spells, and the filters could easily have cracked."

The visitor admitted that secret documents from Sverdlovsk were kept in the archives of the KGB all the way until 4 December 1990. It was then that the USSR Council of Ministers issued a supersecret decree "On the Work on Special Projects" (most of those documents were signed at that time by N. Ryzhkov). That decree ordered that all secret papers be destroyed. It was to no avail that the state advisor on ecology and health care went to the then head of government I. Silayev.

Former Military Base No. 19 has been renamed about 10 times. First it was the Scientific Research Institute of Vaccine Preparations, and later, a sector of the Scientific Research Institute of Microbiology of the Ministry of Defense. In December 1991, when even the veterans began to get confused about its name, the base received the name of Center for Military-Technical Problems of Biological Defense of the Scientific Research Institute of Microbiology of the Ministry of Defense.

At one time, everything was all so very simple. The Americans didn't even consider hiding the fact that in the early 1970s, they had about 10 kinds of biological weapons. So the specialists from Sverdlovsk, Kirov, Zagorsk, and other of our secret centers had to do "nothing more than" things like find a vaccine for known diseases, figure out the probable losses that would come from the use of those weapons, and develop plans for decontamination. The international convention that banned the development, production, storage, and acquisition of biological weapons ruined all that. In 1972, the convention was signed by the Soviet Union, too.

"Work like that has been done and is being done throughout the world," said Col. Gleb Arkhangelskiy, deputy chief of the Center for Science, brushing aside the digression. "After the signing of the convention, there were three international conferences, but a unified system for monitoring was never created. How do you determine, for example, whether strains of, say, brucellosis are being studied in a university laboratory, whether the work is being done for peaceful purposes or for military purposes, under orders from the Pentagon?"

People on the base don't like talking about the anthrax epidemic of 13 years ago. They explain that the center's specialists were not involved in the work of the commissions, that they were not approached for help, and that they didn't even see the results of the examinations of the sick individuals. Even though, perhaps, a better place for conducting any such research couldn't have been found.

The vaccination of the Sverdlovsk residents began about a month after the onset of the epidemic, when the number of dead had already reached into the dozens. The residents of Base No. 19 were vaccinated with an

anthrax vaccine that was produced in the base's own laboratories not long before the tragedy.

"It had a great many advantages," explains Colonel Arkhangelskiy. "It was purer, less reactogenic. We asked for permission back then to 'treat' Sverdlovsk at least, but we never got a reply. Instead, they used a Tbilisi vaccine and vaccinated with a triple dose, well aware that there could be serious complications."

According to our information, nobody from Base No. 19 died from the anthrax.

In the years gone by, the center's specialists have been approached only once about that very vaccine. In January 1991, just before the start of the war in the Persian Gulf, when Saddam Hussein declared to the entire world that, in the event of military action, the Iraqi army would use strains of that same anthrax. In Pentagon laboratories, either they didn't have the proper vaccine, or they simply didn't have it in proper quantities, but they approached the Soviet leadership with a request for it, explaining that the American army couldn't vaccinate all its soldiers.

"If they had approached us before 1985, we could have helped them," Arkhangelskiy says. "Back then, we had what was estimated as some 10 million man-doses of the vaccine on the base. But after 1985, we began receiving orders to shut down one research area after another, and we stopped producing our own vaccine. By 1985, we were already working on improved vaccines for that same anthrax and brucellosis, and we were doing research on glanders and melioidosis, for which there are no vaccines at all."

The center ended its active work a year ago. That's when all testing on the island of Vozrozhdeniye ceased ("Look, they shut down the testing ground, so how are you supposed to determine a lethal dose for a human if you don't test it on animal models?!"). They switched to working with simulators, among which certainly not the last is that same anthrax vaccine.

The projects the specialists of the center are proposing today sound like a collection of science-fiction stories. They are preparing to do the following:

- cleanse maternity hospitals of staphylococcus
- disinfect poultry farms and railroad cars, removing every kind of fungus or mold
- destroy chemical weapons and highly toxic waste with their own bacteria
- clean up spills of oil and kerosene with microorganisms that will reprocess the oil into protein that will go in food for fish
- set up production of the very antibiotics that hospitals are so catastrophically short of

Back then, in 1979, the families and relatives of those who died were given compensation—50 rubles. Exactly 13 years later, on 4 April 1992, the president of Russia, as if covering up someone's guilt, signed the law "On

Improving the Pensions of Families of Citizens Who Died As a Result of Anthrax in the City of Sverdlovsk in 1979."

Almost at the same time, Yeltsin finally admitted openly that, yes, our country had violated the Convention of 1972.

Had not the son of the chief physician of the Sverdlovsk Oblast Hospital gone to the university, the riddle of the Krasnoufimsk fields would probably never have come up.

In August 1989, the senior Sibertsev went to the Krasnoufimskiy Sovkhoz to visit his son. While waiting for the students to arrive from the onion fields, he noticed four girls with a strange gait: their feet were "slapping" against the ground. They were immediately sent to a medical examination, in which disturbances in the nervous system activity were found—paresis (numbness) of the extremities.

It turned out that the strange illness had stricken more than 200 students that same year. And again, as had happened 10 years before, the medical luminaries went to Sverdlovsk. A commission of the USSR Ministry of Health, the Ministry of Defense, and the Institute of Biophysics arrived, as did state security specialists. In vain.

Initially, as usual, the students were blamed for everything: They probably drank beer with dichlorophos. Then it was said that the ill-starred fields contained toxic chemicals that exceeded the maximum permissible levels by 240-fold. But not a trace of pesticides was found in the blood of those who took sick.

Even though the health-epidemiological station banned the use of toxic chemicals throughout the entire oblast, new outbreaks of the illness occurred on the Krasnoufimsk fields last year. Similar symptoms were found in individuals working in fields in Beloyarsk and Kamensk rayons. Questioning of the students revealed that they had felt similar symptoms even earlier, before 1989, but they were afraid to say so, for fear they would be considered malingerers.

The strange illness forced scientists to comb the vicinity of Krasnoufimsk. Now a new version of the cause was born. It turns out that near the fields is a secret facility—a "state reserve" warehouse of radioactive monocycle sand of the Pobeda combine. In the 1950s, it was laid in store under the personal order of Beriya, to be used for the production of nuclear weapons. The sand was of no use, and the warehouses were abandoned.

The oblast health-epidemiological station brought an action against the Ministry of Defense. Guards once again appeared at the warehouses. The radioactive version of the cause of the illness, however, remained just another version. In its place, a careful examination of urban and rural residents showed that the residents of

Sverdlovsk Oblast—mainly, the children and teenagers—suffer from severe avitaminosis.

To date, the number of individuals who have come down with the strange illness is at 284. And although the mystery of the Krasnoufimsk fields is still unsolved, local kolkhoz workers and sovkhoz workers are sending the oblast government dispatches requesting that new students be sent to harvest the onions.

"We don't have a moral right to send students there," says V. Tretyakov, prorector of the Ural State University. "There won't be any orders given or any mandatory student detachments. After all, pesticides have been used there for several decades, and maybe toxic chemical agents have formed there..."

The most dangerous places will, perhaps, have to be left unharvested. The oblast health-epidemiological station isn't too upset about that: The peak of unemployment is expected in Yekaterinburg by the fall. The fields not harvested by students will make for pretty good feeding for the poor in a cold winter.

How many other unknown diseases are roaming about the former USSR?

"Unbeknownst to the rest of the world, a disease broke out 11 years ago in our city of Krasnoyarsk and then quietly disappeared, leaving in its wake nearly 500 sick children. Until now, only a handful of medical people and parents knew about it.

"My son was born in October 1980, and by November he was already being treated for pneumonia and came down with some mysterious disease that was later called uveitis. His temperature rose to 40° [centigrade], and conjunctivitis and a closing of the pupil began. The virus affected newborns only. Children in whom both eyes were affected were blinded even before they had learned to see. The disease was especially noted in blue-eyed children—the color of the affected eye would turn dark blue.

"They told us openly that there wouldn't be any improvement. At that time, in the thick of the battle for vision, they didn't look any farther. The official version that came down to the parents was something like, The ecological conditions in Krasnoyarsk have revived a virus that was "asleep." In January 1981, a delegation of medical people came to Krasnoyarsk from the Gelmgolts Moscow Institute, where there were probably also some clues to the disease. A special uveal center was opened.

"And now this year, in the boarding school where our children are gathered, cases of hepatitis started to appear. Later, they were linked to the disease itself. It turns out that almost all the internal organs of the children have been affected, and they suspect that the brain is affected, too.

"We parents have our own version of what happened: secret tests of biological weapons, or waste from the 'numbered' enterprises..."

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